

AMENDMENT UNDER 37 C.F.R. 1.116 – EXPEDITED PROCEDURE
Serial Number: 10/750,534
Filing Date: December 31, 2003
Title: COMPONENT PACKAGING APPARATUS, SYSTEMS, AND METHODS

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REMARKS

This responds to the Office Action mailed on August 25, 2008.

Claims 1-8, 11, 12, and 27-30 are now pending in this application.

§112 Rejection of the Claims

The pending claims were rejected. Claim 1 has the limitation of “a major surface of the substrate having an embossing profile with a first major surface and a second major surface”. The Office has interpreted this to mean “the substrate has a first major surface and second major surface, such surfaces each having an embossing profile. Furthermore, it is noted that the Examiner’s interpretation is consistent with what has been amended in the Specification.” (Office Action at pp. 2-3).

The Applicant disagrees with this interpretation. For this interpretation to be more consistent with the specification, claim 1 would need to read “a major surface of the substrate having an embossing profile with a first major surface embossing profile and a second major surface embossing profile”. (Additions made). The Applicant does not believe this interpretation is consistent with what has been disclosed. The applicant believes a flat surface does not need a descriptor such as “profile” as this would appear to be typically for a non-flat surface.

Further to this rejection, the Applicant directs the attention of the Office to the Specification at paragraph [0069]: “Some embodiments provide an apparatus including an embossing tool substrate made of a first metal, first and second major surfaces of the substrate having an embossing profile” For the interpretation of the Office to be more consistent with the specification, this paragraph would need to read “Some embodiments provide an apparatus including an embossing tool substrate made of a first metal, first and second major surfaces of the substrate each having an embossing profile.” (Additions made). The Applicant does not believe this interpretation is consistent with what has been disclosed. Withdrawal of the rejection is respectfully requested.

In the Response to Arguments section the Office states “Applicant further argues that claim 1 now requires a first coating over the first and second major surface of the substrate; however, such an argument is not consistent with what is actually claimed ...” (Office Action at

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page 17). But the Applicant respectfully asserts what is claimed is consistent with what is illustrated and that the interpretation by the Office that the first major surface has a first profile and the second major surface has a second profile is not consistent and such interpretation should be rejected.

§103 Rejection of the Claims

Claim 1 was rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, further in view of DePyudt et al., and further in view of Homola. Applicant respectfully traverses the rejection and requests the Office to consider the following.

The Office Action admits that Formato “is silent with respect to the presence of a first and second coating on the first major surface of the substrate, the first coating providing an adhereable surface and the second coating over the first coating, the second coating providing a non-adhesive outer surface.” (Office Action at page 3).

The Office asserts in an embossing apparatus, Okazaki teaches an embossing tool. But Okazaki’s tool does not have coatings over the second major surfaces as Applicant claims and therefore cannot add to fill the void the Office has admitted exists in Formato.

The Office also asserts DePyudt teaches adherable and non-adhereable surfaces as claimed. But the cap layer 50, which the Office has characterized as the equivalent of Applicant’s claimed second coating with “non-adhesive” qualities.

The problem with this characterization of the cap layer 50 is that DePyudt teaches the cap layer 50 can be of the exact same selected materials as the layer 44. Consequently, there is no difference in adhesion or non-adhesion appreciated by DePyudt. The Table illustrates Depyudt’s teaching to this effect, with the teaching for layer 44 at column 7, lines 46-58, and the teaching for layer 50 beginning at column 7, line 66 and ending at column 8, line 9.

The dielectric material 44 can be any suitable material, but examples of some suitable materials include, but are not limited to:	Examples of some suitable materials for the cap layer 50 include dielectric materials such as
aluminum oxide, silicon dioxide, yttrium oxide, silicon carbide, borosilicate glass, borophosphosilicate glass, tantalum oxide, silicon nitride, chrome oxide, nickel oxide, and combinations thereof.	aluminum oxide, silicon dioxide, yttrium oxide, silicon carbide, borosilicate glass, borophosphosilicate glass, tantalum oxide, silicon nitride, chrome oxide, nickel oxide, and combinations thereof.
The dielectric material 44 can be deposited by any suitable method,	The cap layer 50 can be deposited by any suitable method,

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such as physical deposition (e.g., sputtering or evaporation) or chemical vapor deposition.	such as physical deposition (e.g., sputtering or evaporation) or chemical vapor deposition.
The thickness of the dielectric layer 44 is preferably about 5 nanometers to about 200 nanometers, more preferably about 10 nanometers to about 50 nanometers.	The thickness of the upper layer of cap layer 50 is preferably about 5 nanometers to about 200 nanometers, more preferably about 10 nanometers to about 50 nanometers.

DePyudt demonstrates by these utterances, that he neither teaches nor appreciates that these layers should be different in adhesive and non-adhesive qualities. Because DePyudt does not teach all the limitations of claim 1, DePyudt does not add anything to fill the voids that the Office has admitted exist in Formato.

The Office also asserts that Homola teaches limitations that are missing in Formato. One error with Homola is that the Office refers to item 130, but item 130 is not illustrated. Homola neglected to include FIG. 1B in the disclosure, even though it is called out. This amounts to a non-enabling reference. Without the illustration, it can only be speculated where to put item 130, and whether item 130 could be mapped to what is set forth in Applicant's claim 1. Even if one were to have Homola's FIG. 1B (which one does not have), the discussion at paragraph [0022] does not call out one coating as an adhesion coating (i.e. 130) and another coating as a non-adhesion coating (i.e. 120). Consequently, Homola cannot add to fill the void the Office has admitted exists in Formato.

Withdrawal of the rejection is respectfully requested.

Claims 2, 3, 5 and 6 were rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, further in view of DePyudt et al., further in view of Öhman, further in view of Imatomi. The Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of Formato, Okazaki, and Depyudt as set forth above are incorporated herein by reference. The Office has admitted that none of Formato, Okazaki, and Depyudt teach the specific metals in a multi-layered stamper, comprised of a layer of a second metal, a layer of a metal oxide and a layer of a metal nitride, respectively.” (Office Action at page 6).

The Office action turns to Öhman to state that Öhman teaches the use of a three-layered substrate. (Ibid). But Öhman does teach the basic structure set forth in claim 1 as set forth above in Applicant's traversal of the rejections under Section 102. A previous Office Action

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admitted Öhman does not teach that the coatings are comprised of zirconium and zirconium nitride, respectively. Further, Claim 1 requires the substrate to be “made of a first metal”, and Öhman’s substrate, item 62, is a polymer. (Öhman at col. 19, line 29). Item 3a is the article that is being impressed by the structure 7, 41, 62.

The structure in Imatomi described by the Office, however, is a weir component of a mold device. This structure, a weir, is an overflow device that does not have anything to do with the actual molding. Further, Imatomi has to do with injection molding of an article, and not with embossing. The cited references are not a related in field of endeavor. Consequently, the combination of cited references do not teach or suggest all the claim limitations, and the citation to Imatomi takes the Office outside the field of endeavor.

Withdrawal of the rejections is respectfully requested.

Claim 4 was also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki and further in view of DePuydt, and further in view of Cheung et al. (U.S. 6,210,514). Applicant respectfully traverses the rejection and requests the Office to consider the following.

Cheung has to do with build-up technology, and not with embossing technology. This is clear by a cursory review of Cheung’s disclosure. For example, FIGs. 7 and 8 illustrate the build-up transfer of the cantilevered element 61 from the “thin film support 65”, onto the “target substrate 63”. This technology is monotonously taught, all the way to the end of Cheung’s disclosure, such as FIG. 27, where step 127 teaches “adhesive application”. Because there no motivation to combine the cited references with Cheung, and because the combination does not teach all the claim limitations, withdrawal of the rejections is respectfully requested.

Claim 8 was also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki et al. or DePuydt et al., further in view of Öhman et al., further in view of Imatomi and further in view of Cheung et al. The Office Action admits that the cited references do not teach a second coating of polyparaxylene. But Cheung has to do with build-up technology, and not embossing technology. Cheung has to do with build-up technology, and not with embossing technology. This is clear by a cursory review of Cheung’s disclosure. For

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example, FIGs. 7 and 8 illustrate the build-up transfer of the cantilevered element 61 from the “thin film support 65”, onto the “target substrate 63”. This technology is monotonously taught, all the way to the end of Cheung’s disclosure, such as FIG. 27, where step 127 teaches “adhesive application”. That a given compound is taught in Cheung, does not amount to a teaching in any of the cited references to collect all the other cited references to make claim 4 obvious.

Claim 11 was also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, further in view of DePuydt or Homola, and further in view of Wago. Applicant respectfully traverses the rejection and requests the Office to consider the following.

The Office Action admits Öhman does not teach that the coatings are comprised of zirconium and zirconium nitride, respectively. The structure in Imatomi described by the Office, however, is a weir component of a mold device. This structure, a weir, is an overflow device that does not have anything to do with the actual molding. Further, Imatomi has to do with injection molding of an article, and not with embossing. The cited references are not related in field of endeavor. Wago adds nothing to cover the admitted deficiencies and the other deficiencies in the cited references. Because there no motivation to combine Öhman with Imatomi, and because the combination does not teach all the claim limitations, withdrawal of the rejections is respectfully requested.

Claim 12 was also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, and further in view of Imatomi. The Applicant respectfully traverses the rejection and requests the Office to consider the following.

The structure in Imatomi described by the Office is a weir component of a mold device. This structure, a weir, is an overflow device that does not have anything to do with the actual molding. Further, Imatomi has to do with injection molding of an article, and not with embossing. The cited references are not a related in field of endeavor. Consequently, the combination of cited references do not teach or suggest all the claim limitations, and the citation to Imatomi takes the Office outside the field of endeavor.

Withdrawal of the rejections is respectfully requested.

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Claims 27-29 were also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, and further in view of DePyudt or Homola, and further in view of Öhman, and further in view of Imatomi, and further in view of Cheung. The Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of these several references as set forth above are incorporated herein by reference.

Okazaki's tool does not have coatings over the second major surfaces as Applicant claims and therefore cannot add to fill the void the Office has admitted exists in Formato.

DePyudt teaches his cap layer 50 can be of the exact same selected materials as the layer 44. Consequently, there is no difference in adhesion or non-adhesion appreciated by DePyudt. The Table illustrates Depyudt's teaching to this effect, with the teaching for layer 44 at column 7, lines 46-58, and the teaching for layer 50 beginning at column 7, line 66 and ending at column 8, line 9.

The dielectric material 44 can be any suitable material, but examples of some suitable materials include, but are not limited to:	Examples of some suitable materials for the cap layer 50 include dielectric materials such as
aluminum oxide, silicon dioxide, yttrium oxide, silicon carbide, borosilicate glass, borophosphosilicate glass, tantalum oxide, silicon nitride, chrome oxide, nickel oxide, and combinations thereof.	aluminum oxide, silicon dioxide, yttrium oxide, silicon carbide, borosilicate glass, borophosphosilicate glass, tantalum oxide, silicon nitride, chrome oxide, nickel oxide, and combinations thereof.
The dielectric material 44 can be deposited by any suitable method, such as physical deposition (e.g., sputtering or evaporation) or chemical vapor deposition.	The cap layer 50 can be deposited by any suitable method, such as physical deposition (e.g., sputtering or evaporation) or chemical vapor deposition.
The thickness of the dielectric layer 44 is preferably about 5 nanometers to about 200 nanometers, more preferably about 10 nanometers to about 50 nanometers.	The thickness of the upper layer of cap layer 50 is preferably about 5 nanometers to about 200 nanometers, more preferably about 10 nanometers to about 50 nanometers.

DePyudt demonstrates by these utterances, that he neither teaches nor appreciates that these layers should be different in adhesive and non-adhesive qualities. Because DePyudt does not teach all the limitations of claim 1, DePyudt does not add anything to fill the voids that the Office has admitted exist in Formato.

The Office also asserts that Homola teaches limitations that are missing in Formato. One error with Homola is that the Office refers to item 130, but item 130 is not illustrated. Homola neglected to include FIG. 1B in the disclosure, even though it is called out. This amounts to a non-enabling reference. Without the illustration, it can only be speculated where to put item 130,

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and whether item 130 could be mapped to what is set forth in Applicant's claim 1. Even if one were to have Homola's FIG. 1B (which one does not have), the discussion at paragraph [0022] does not call out one coating as an adhesion coating (i.e. 130) and another coating as a non-adhesion coating (i.e. 120). Consequently, Homola cannot add to fill the void the Office has admitted exists in Formato.

The Office previously admitted Öhman does not teach that the coatings are comprised of zirconium and zirconium nitride, respectively. Further, Claim 27 requires the substrate to be "made of a first metal", and Öhman's substrate, item 62, is a polymer. (Öhman at col. 19, line 29). Item 3a is the article that is being impressed by the structure 7, 41, 62.

Regarding Cheung, Cheung has to do with build-up technology, and not embossing technology. Cheung has to do with build-up technology, and not with embossing technology. This is clear by a cursory review of Cheung's disclosure. For example, FIGs. 7 and 8 illustrate the build-up transfer of the cantilevered element 61 from the "thin film support 65", onto the "target substrate 63". This technology is monotonously taught, all the way to the end of Cheung's disclosure, such as FIG. 27, where step 127 teaches "adhesive application". That a given compound is taught in Cheung, does not amount to a teaching in any of the cited references to collect all the other cited references to make claim 4 obvious.

Withdrawal of the rejections is respectfully requested.

Claim 30 was also rejected under 35 USC § 103(a) as being unpatentable over Formato in view of Okazaki, and further in view of DePuydt or Homola, and further in view of Öhman, and further in view of Imatomi, and further in view of Cheung, and further in view of Wago. The Applicant respectfully traverses the rejection and requests the Office to consider the following.

The deficiencies of these several references as set forth above are incorporated herein by reference.

The Office Action admits Öhman does not teach that the coatings are comprised of zirconium and zirconium nitride, respectively. The structure in Imatomi described by the Office, however, is a weir component of a mold device. This structure, a weir, is an overflow device that does not have anything to do with the actual molding. Further, Imatomi has to do with injection molding of an article, and not with embossing. The cited references are not related in

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field of endeavor. Wago adds nothing to cover the admitted deficiencies and the other deficiencies in the cited references. Cheung has to do with build-up technology, and not with embossing technology. This is clear by a cursory review of Cheung's disclosure. For example, FIGs. 7 and 8 illustrate the build-up transfer of the cantilevered element 61 from the "thin film support 65", onto the "target substrate 63". This technology is monotonously taught, all the way to the end of Cheung's disclosure, such as FIG. 27, where step 127 teaches "adhesive application".

Because there no motivation to combine these several references, and because they severally take the Office outside the field of endeavor, withdrawal of the rejections is respectfully requested.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (503) 712-3485 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 50-0221.

Reservation of Rights

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or

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assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.


Respectfully submitted,

PETER A. DAVISON ET AL.

By their Representatives,

Customer Number: 59796

Date: January 26, 2009

By /  /
John M. Greaves
Reg. No. 40,362
801 554-9862

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited either via facsimile or via the United States Postal Service addressed to: MS Amendment, United States Patent and Trademark Office, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 26 day of January 2009.

Kyrstin Ryan
Name

/Kyrstin Ryan/
Signature